UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,875	11/19/2001	William P. Delaney	01-642	3422

			EXAMINER
24319	7590	09/08/2004	HOANG, PHUONG N

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ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/001,875	DELANEY, WILLIAM P.
	Examiner	Art Unit
	Phuong N. Hoang	2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2001*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
     closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 15* is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1 - 15* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *19 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All   b)☐ Some * c)☐ None of:
         1.☐ Certified copies of the priority documents have been received.
         2.☐ Certified copies of the priority documents have been received in Application No. _____.
         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
             application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 15 are pending for examination.

Claim Objections

2.   Claims 13 is objected to under 37 CFR 1.75(c), as being of improper dependent

form for failing to further limit the subject matter of a previous claim. Applicant is

required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper

dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

4.   Claims 7 – 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the enablement requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the

invention.

a.   As to claim 7, at lines 21 – 22, examiner does not see where applicant

disclosed the step of "disallowing up-level clients from interacting with down-level

server". It is only disclosed on summary of the invention and the conclusion, not

how it is implemented. On page 8 lines 16 – 25, either the client or the server

can be the server, and the receiver must be able to accommodate data that were

encoded using either newer or older versions of the interface. Examiner does

not see where and how the step of "disallowing up-level clients from interacting

with down-level server" is enabled.

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

6.   Claims 5 – 15 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

b.   The claim language in the following claims is not clearly understood:

i.   As to claim 5,

. at lines 1 – 3, it is not clearly indicated what "for a down-level

sender, if the up-level definition of a structure has more data elements

than the down-level definition of the structure," (i.e., is it the structure of

the sender has more data elements than the structure of the receiver).

The rest of the claim claimed setting the default for the fields that the

receiver does not exit. For examination purpose, examiner treats the

claim as the sender's definition structure has more elements than the

receiver's definition structure.

ii.   As to claim 7,

.   at lines 3 – 4, it is not clearly indicated what "for an up-level

sender, if the up-level definition of a structure has more data elements

than the down-level definition of the structure," (i.e., is it the structure of

the sender has more data elements than the structure of the receiver).

For examination purpose, examiner treats the claim as the sender

definition structure has more elements than the receiver definition

structure.

.   at lines 11 – 12, it is not clearly indicated what "for a down-level

sender, if the up-level definition of a structure has data elements than the

down-level definition of the structure," (i.e., the sender has more or less

data than the receiver). For examination purpose, examiner treats the

claim as a sender has less data elements than a receiver.

.   at lines 17 – 18, it is not clearly indicated what "if the up-level

definition of a structure requires more data elements than the

down-level definition of data elements," (i.e., is it the definition of a server

requires more data elements than a client). For examination purpose,

examiner treats the claim as a server has more data elements than a

client.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 1 – 2 are rejected under 35 U.S.C. 102(b) as being anticipated by

Lam, US patent no. 5,926,636.

9.   **As to claim 1**, Lam teaches a method for communicating across a

heterogeneous network having components with dissimilar data structure definition,

comprising the step of:

prefixing an encoded data structure with a length value that reflects the size of

the encoded data structure (packs RPC_message including the size of the message,

col. 11 lines 1 – 24).

10.   **As to claim 2**, Lam teaches the step comprising of decoding the encoded data

structure, a down-level receiver (converts the message to the compatible format with

the receiving computer by adding or removing parameters, col.11 lines 25 – 55) reads

the length value and decoding the encoded data structure according to the receiver's

data definition.

Claim Rejections - 35 USC § 103

11.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

12.   **Claims 3 – 4 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over Lam, US patent no. 5,926,636 in view of Hammond, US patent no. 6,556,220.

13.   **As to claim 3**, Lam teaches the step comprising of upon completion of decoding,

the receiver determining the amount of the encoded data structure that was decoded.

Lam does not teach the step of skipping the remainder of the encoded data

structure according to the length value.

Hammond teaches the step of skipping the remainder of the encoded data

structure according to the length value (if the exact method does not exist, the

remainder of the try block is skipped, col. 8 lines 50 – 60).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Lam and Hammond's system because

Hammond's ability to recognize and skip processing the rest of the message would

enable the receiver process the data with its incompatible format without updating its

current format.

14.   **As to claim 4,** Lam teaches the step of wherein the method is implemented

through instructions on a computer-readable medium, for communicating data between

programs along a data communication path (RPC, title and abstract).

15.   **Claims 5 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over**

Lam, US patent no. 5,926,636 in view of Boutcher, US patent no. 6,493,768, and

further in view of the admitted prior art (APA) pages 1 - 4.

16.   **As to claim 5,** Lam does not teach the steps comprising of: for a down-level

sender, if the up-level definition of a structure has more data elements than the down-

level definition of the structure, for built-in type data fields, automatically assigning a

default value to any field for which the received data has provided no value, and, for

derived type data fields, calling an initialization routine which assigns a default value to

any built-in type data field or calls the initialization routine for a derived type data field.

        Boutcher teaches the steps comprising of: for a down-level sender (client

sending RPC message, col. 7 and 8), if the up-level definition of a structure has more

data elements than the down-level definition of the structure, (col. 8 lines 25 – 35), for

built-in type data fields (col. 9 lines 45 – 65), automatically assigning a default value to

any field for which the received data has provided no value, calling an initialization routine which assigns a default value (setting specific defaults for parameters,....by name, col. 9 lines 20 – 25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Lam and Boutcher's system because Boutcher's assigning a default value would handle the extra fields that currently do not exit in the data structure to make the current data structure to be compatible with the sender's structure.

Lam and Boutcher do not explicitly teach the parameter fields comprising derived type data fields.

The APA teaches the steps of the parameters comprising the derived type data fields (derived type, page 3 lines 5 – 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Lam, Boutcher, and the APA's system because the APA's type of parameters would provide common data fields in object oriented languages and used as making remote procedure call to enable senders and receivers to communicate with each other.

17.   **As to claim 6,** see rejection for claim 4 above.

18.   Claims 7 - 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lam, US patent no. 5,926,636 in view of Hammond, US patent no. 6,556,220, further in view of Boutcher, US patent no. 6,493,768, and further in view of the admitted prior art (APA) pages 1 - 4.

19.   **As to claim 7**, it is a method claim of claims 1, 3, and 5 above. See rejection for claims 1, 3, and 5 above. Further, Boutcher teaches the steps of:

if the up-level definition of a structure requires more data elements than the down-level definition of data elements, then following a set of predetermined rules (mapping rules, col. 8 lines 25 – col. 9 lines 25) which include extending only data structures which are passed from a server to a client (col. 8 lines 25 – 60 and col. 10 lines 55 – 60); ensuring that a down-level client's ignorance of extended data causes no ill effects in that client's operational behavior (the mapping does not affect the client's operational behavior since the server upgrade the version which is compatible with the client); allowing down-level clients to interact with up-level servers and disallowing up-level clients from interacting with down-level servers (adding or removing parameters, col. 9 lines 20 – 25); and, in cases where extensions are needed for data structures passed from a client to a server (adding parameters, col. 9 lines 20 – 25), defining a new data structure that includes both old data fields and new data fields (new data structures is defining after adding parameters, col. 9 lines 20 – 25 and col. 2 lines 1 – 19).

20.   **As to claim 8,** see rejection for claim 4 above.

21.   **As to claim 9,** Boutcher teaches the method is practiced without creating a new

data structures (the structure is just upgraded, col. 2 lines 5 – 10 and col. 9 lines 10 –

25).

22.   **As to claim 10,** Lam's system does not use the lock-step strategy.

23.   **As to claim 11,** Boutcher teaches the step of the built-in type includes at least

one of the groups consisting of string (col. 9 lines 45 – 60).

24.   **As to claim 12,** the APA teaches the derived type includes at least one of

structure and union (structure and union, page 3 lines 5 - 10).

25.   **As to claim 13,** Lam teaches the step of server and client (server and client,

abstract) communicating with each other using the method of claim 8 (RPC, abstract).

26.   **As to claim 14,** Lam teaches the step of wherein the method is implemented

using a procedure calling model (RPC, abstract) for distributed applications and a

standard representation for data in the network to support heterogeneous network

(heterogeneous computer network, title).

27.   **As to claim 15,** Lam teaches wherein the procedure calling model is defined by

the Remote Procedure Call (RPC) package and the standard representation of data is

accomplished through the Extenal Data Representation (XDR, col. 11 lines 25 – 55).

Conclusion

28.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Brandle et al, US patent no. 5,218,699, demonstrating a remote procedure call in

heterogeneous systems.

Bowen, US patent no. 5,774,719, demonstrating a remote procedure call that

replacing the undesired padding bits with zero.

Vasudevan et al, US patent no. 6,446,137, demonstrating a remote procedure
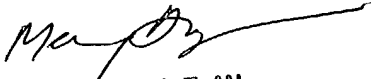
call system in an interoperability system.

29.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Phuong N. Hoang whose telephone number is (703)

605-4239. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30

pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703)305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ph
September 3, 2004

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